



NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY  
SERGARH-756060, BALASORE (ODISHA)  
(Approved by AICTE& affillated to SCTE&VT, Odisha)



## LESSON PLAN

**SUBJECT: Th-5(ENVIRONMENTAL STUDIES)**

**Name Of The Faculty :-** Er. Amlan nayak

**Branch :-** Mechanical Engineering

**Session :-** 2024-25

**Semester :-** 3rd

**Examination :-** 2024 (w)

### CHAPTER WISE DISTRIBUTION OF PERIODS

Sl.No.	Name of the chapter as per the Syllabus	No. of Periods as per the Syllabus	No. of periods actually needed
1	The Multidisciplinary nature of environmental studies	4	2
2	Natural Resources	10	14
3	Systems	8	9
4	Biodiversity and it's Conservation	8	10
5	Environmental Pollution	12	13
6	Social issues and the Environment	10	12
7	Human population and the environment	8	8
	Total Period:	60	68

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Discipline: Mechanical ENGINEERING	Semester: 3rd	Name of the Teaching Faculty: Er.Amlan Nayak	
		SESSION : 2024-25	EXAMINATION : 2024 (W)
Week	Class Day	Topics to be Covered	
1 <sup>st</sup>	1 <sup>st</sup>	Introduction to The Multidisciplinary nature of environmental studies	
	2 <sup>nd</sup>	<b>unit-1: The Multidisciplinary nature of environmental studies</b> The Multidisciplinary nature of environmental studies: Definition, scope and importance.	
	3 <sup>rd</sup>	Need for public awareness.	
	4 <sup>th</sup>	<b>unit-2 : Natural Resources</b> Renewable and non renewable resources	
2 <sup>nd</sup>	1 <sup>st</sup>	Natural resources and associated problems.	
	2 <sup>nd</sup>	Forest resources: Use and over-exploitation, deforestation, case studies, Use and over-exploitation.	
	3 <sup>rd</sup>	Deforestation, case studies.	
	4 <sup>th</sup>	Timber extraction mining, dams and their effects on forests and tribal people.	
3 <sup>rd</sup>	1 <sup>st</sup>	Mineral Resources: Use and exploitation.	
	2 <sup>nd</sup>	environmental effects of extracting and using mineral resources.	
	3 <sup>rd</sup>	Food Resources: World food problems .	
	4 <sup>th</sup>	changes caused by agriculture and over grazing.	
4 <sup>th</sup>	1 <sup>st</sup>	Effects of modern agriculture , fertilizers pesticides problems, water logging, salinity.	
	2 <sup>nd</sup>	Energy Resources: Growing energy need, renewable and nonrenewable energy sources, use of alternate energy sources, case studies.	
	3 <sup>rd</sup>	Land Resources: Land as a resource ,land degradation ,man induces	
	4 <sup>th</sup>	Role of individual in conservation of natural resources.	
5 <sup>th</sup>	1 <sup>st</sup>	Equitable use of resources for sustainable lifestyles.	
	2 <sup>nd</sup>	<b>Unit 3: Systems</b> Concept of an ecosystem	
	3 <sup>rd</sup>	Structure and function of an ecosystem	
	4 <sup>th</sup>	Producers, consumers, decomposers	
6 <sup>th</sup>	1 <sup>st</sup>	Energy flow in the ecosystems.	
	2 <sup>nd</sup>	Ecological succession.	
	3 <sup>rd</sup>	Food chains, food web and ecological pyramids	
	4 <sup>th</sup>	Introduction, types, characteristic features, structure and function of the following ecosystem.	
7 <sup>th</sup>	1 <sup>st</sup>	Forest ecosystem.	
	2 <sup>nd</sup>	Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).	

Week	Class Day	Topics to be Covered
7 <sup>th</sup>	3 <sup>rd</sup>	<b>Unit 4: Biodiversity and it's Conservation</b> Introduction-Definition: genetics, species and ecosystem diversity.
	4 <sup>th</sup>	Biogeographically classification of India.
8 <sup>th</sup>	1 <sup>st</sup>	Value of biodiversity: consumptive use
	2 <sup>nd</sup>	Value of biodiversity: productive use
	3 <sup>rd</sup>	social ethical, aesthetic and opt in values.
	4 <sup>th</sup>	Biodiversity at global.
9 <sup>th</sup>	1 <sup>st</sup>	national and local level.
	2 <sup>nd</sup>	Threats to biodiversity: Habitats loss
	3 <sup>rd</sup>	Threats to biodiversity: poaching of wild life
	4 <sup>th</sup>	Threats to biodiversity:man wildlife conflicts.
10 <sup>th</sup>	1 <sup>st</sup>	<b>Unit 5: Environmental Pollution</b> Definition Causes, effects and control measures of: Air pollution.
	2 <sup>nd</sup>	Water pollution.
	3 <sup>rd</sup>	Soil pollution
	4 <sup>th</sup>	Marine pollution
11 <sup>th</sup>	1 <sup>st</sup>	Noise pollution
	2 <sup>nd</sup>	Thermal pollution
	3 <sup>rd</sup>	Nuclear hazards.
	4 <sup>th</sup>	Solid waste Management: Causes, effects
12 <sup>th</sup>	1 <sup>st</sup>	Control measures of urban and industrial wastes.
	2 <sup>nd</sup>	Role of an individual in prevention of pollution.
	3 <sup>rd</sup>	<b>INTERNAL ASSESMENT</b>
	4 <sup>th</sup>	<b>INTERNAL ASSESMENT</b>
13 <sup>th</sup>	1 <sup>st</sup>	Disaster management: Floods
	2 <sup>nd</sup>	Disaster management:earth quake
	3 <sup>rd</sup>	Disaster management: cyclone and landslides
	4 <sup>th</sup>	<b>Unit 6: Social issues and the Environment</b>
14 <sup>th</sup>	1 <sup>st</sup>	Urban problems related to energy.
	2 <sup>nd</sup>	Water conservation, rain water harvesting,
	3 <sup>rd</sup>	water shed management.
	4 <sup>th</sup>	Resettlement and rehabilitation of people,its problems and concern.
15 <sup>th</sup>	1 <sup>st</sup>	Environmental ethics: issue and possible solutions.
	2 <sup>nd</sup>	Climate change,global warming
	3 <sup>rd</sup>	acid rain,ozone layer depletion
	4 <sup>th</sup>	nuclear accidents and holocaust, case studies
16 <sup>th</sup>	1 <sup>st</sup>	Air (prevention and control of pollution) Act
	2 <sup>nd</sup>	Water (prevention and control of pollution) Act



Week	Class Day	Topics to be Covered
16 <sup>th</sup>	3 <sup>rd</sup>	Public awareness.
	4 <sup>th</sup>	<b>Unit 7: Human population and the environment</b> Population growth and variation among nations.
17 <sup>th</sup>	1 <sup>st</sup>	Population explosion-family welfare program.
	2 <sup>nd</sup>	Environment and human health.
	3 <sup>rd</sup>	Human rights.
	4 <sup>th</sup>	Value education
18 <sup>th</sup>	1 <sup>st</sup>	Value education
	2 <sup>nd</sup>	Role of information technology in environment and human health
	3 <sup>rd</sup>	Role of information technology in environment and human health
	4 <sup>th</sup>	Revision .

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